

FOUR NEW SPECIES OF NEOTROPICAL PENTATOMIDS (HETEROPTERA, PENTATOMIDAE)

BY HERBERT RUCKES¹

The following four new species are of interest in so much as each represents a separate Tribe within the Pentatomidae. With the exception of the specimens listed under the name of *Sciocoris crassus*, new species, all examples have been in the collection of the American Museum of Natural History for many years. It is only proper that they be assigned names at this time.

In the descriptions the various numerical ratios given are dimensions measured through a binocular microscope using a $\times 2$ objective and a $\times 9$ ocular filled with a micrometer scale divided into 200 linear units. They are not in terms of millimeters except as specified for the holotypes and allotypes.

I wish to extend my sincere thanks to Mrs. Rose Ismay for typing the manuscript of this article.

Tribe Sciocorini Amyot and Serville

Sciocoris crassus, new species

Oval, moderately convex above, more so below; sordid fulvous; punctures sometimes ferruginous, sometimes fuscous, moderately coarse and moderately dense.

Head slightly declivent, about one-fourth wider through the eyes than long medianly (100×80), its median length equal to the median length of the pronotum (80×80); lateral margins provided with a blunt lobule or small dentation just before each eye, then weakly sinuate to a broadly rounded apex; disc coarsely and regularly punctured, the apical portion between the overlapping juga and tylus weakly impressed; ocelli dull red and twice as far apart as each is from its eye; eyes fuscous. Antennae reddish brown, the apical segment darker; basal segment stouter than the others; segmental ratios: 15/23/13/20/27, i.e., segment III the shortest and subequal to I; segment V the longest.

Pronotum almost rectangular, two and a quarter times as wide across the humeri as long medianly (180×80); humeri very obtusely rounded, not at all produced and grading into the obsolescent posterolateral margins; posterior margin transverse; anterolateral margins with a slight convex curvature; anterior margin shallowly excavated behind the head and then

¹ Research Associate, Department of Insects and Spiders, the American Museum of Natural History, and Professor Emeritus, the City College of New York.

truncate behind the eyes; anterior lateral angles obtusely rounded; disc thickish inside the anterolateral margins, the outer surface then sloping gradually to the margins which are subcarinate; a broad but shallow transverse groove across the middle of the disc and ending laterally in enlarged, deeper, subrotund impressions; punctures coarse but shallow.

Scutellum about as wide as long (117×113), reaching well behind the middle of the abdomen; each basal angle provided with a minute, fuscous to piceous, calloused spot, followed posteriorly by a small subfoveal impression; a broad basal, vaguely triangular paler area raised slightly above the remaining portion of the disc; surface of the disc slightly convex, giving the impression of thickness; apex broadly rounded; punctures rather evenly distributed and moderately dense. Hemelytra more finely punctured; the apical margin essentially straight and the outer apical angle rectilinear to acute, definitely not obtusely rounded; membrane sordid amber, veins ill-defined, when showing, they are subparallel. Connexivum rather narrowly exposed, the margins thickish; apical segmental angles rectilinear to obtuse and not at all produced, the entire lateral margin continuous; segments alternated sordid fulvous and fuscous, the punctures moderately coarse; apical angle of the sixth segment, obtuse.

Venter quite convex, sordid fulvous or paler with ferruginous and fuscous punctures; thorax coarsely and irregularly punctured; a broad longitudinal fuscous or dark brown band extending each side of the abdominal disc, becoming evanescent posteriorly in the male but completely infuscating the median portion of the sixth sternite in the female; this fuscous band followed laterally by a parallel pale band which in turn is followed laterally by another interrupted and posteriorly evanescent fuscous band; submarginal portion of the abdominal disc pale and finely punctured; segmental incisures bearing marginal small, squarish fuscous patches; spiracles ferruginous; anterior median margin of the sixth abdominal sternite in the male obtusely roundly angled; coxae and trochanters fulvous; femora infuscated beyond the basal two-thirds; tibiae and tarsi concolorous sordid brown to fuscous.

Apical margin of the male genital segment nearly straight, showing little evidence of sinuosity, and subtended medianly by a transverse oval fovea; head of the paramere (clasper) thin, foliaceous and somewhat spoon shaped, lying entirely within the cavity of the segment. Basal plates of the female genital valves setigerous, subtriangular and each about as long as wide at the base.

Described from 10 specimens.

Holotype: Male: 7.5 mm. long; 4.5 mm. wide across the humeri. Tejupilco, Temescaltepec, Mexico. June 29, 1933. H. E. Hinton and R. L. Usinger, collectors. Deposited in the collection of the California Academy of Sciences, San Francisco.

Allotype: Female: 8.0 mm. long; 4.5 mm. wide across the humeri. Same data as above.

Paratypes: Six males and two females. Same data as above

except that one male and one female are deposited in the collection of the American Museum of Natural History.

Unlike either of the two other species of *Sciocoris* (*microphthalmus* Flor and *longifrons* Barber) heretofore recorded from North America. The more reddish tone of the body, its thickness and more robust appearance readily distinguish it. The obtuse angles at the four corners of the pronotum, the obsolescent nature of the posterolateral margins of that part, the longitudinal fuscous banding on the abdominal venter, and ferruginous spiracles are other characteristics that separate this species from the other two mentioned above.

Tribe Discocephalini Fieber

Dinocoris robustus, new species

This is the largest and most robust species of the genus that I have so far encountered. Unfortunately all the available specimens are females. No study of the male genitalia being possible at the present time, the phylogenetic relationship to allied species is doubtful.

Broadly oval, quite convex above and quite flat below; rich fulvous to ochraceous; punctures very coarse and for the most part congested; punctures and bandings dark reddish brown, castaneous or fuscous.

Head shorter medianly than wide through the eyes (110 × 135); lateral margins weakly sinuate and moderately reflexed, converging to a narrowly rounded apex; juga not exceeding the tylus by more than the width of one jugum there and then narrowly overlapping; a single line of dark reddish punctures bordering the vertex laterally and lying adjacent to the ocelli; ocelli bright red and twice as far apart as each is from its eye; eyes fuscous. Antennal tubercles very large, each as big as an eye and totally visible from above; antennae at least three-fourths the length of the body, rich orange brown with the apical third of segment II and the distal halves of segments III and IV piceous; segmental ratios: 70/250/175/150, i.e., antennae four-segmented with segment II the longest, as is typical for the genus.

Pronotum two and two-thirds as wide across the humeri as long medianly (400 × 150); humeri slightly tumid, the angles rectilinear, hardly produced; anterolateral margins mildly sinuate and narrowly reflexed anteriorly; punctures coarse and congested laterally, somewhat more widely spaced centrally; the center ones reddish, the lateral ones castaneous to fuscous; the embossed ochraceous or fulvous portions irregularly reticulate.

Scutellum about one-half longer than wide at the base (340 × 225); basal third gibbous, the crest of this elevation higher than the adjacent surface of the pronotum, very coarsely and deeply pitted with castaneous and

fuscous, basal angles calloused ochraceous; middle third ochraceous with a very few small punctures but with a median line of five or six rotund, very shallow, reddish brown pits; basal half of the distal third, just beyond the point where the frenum ends, provided with two large squarish castaneous, or darker, patches, apical half of this third ochraceous with some shallow coarse punctures; apex narrowly rounded. Hemelytra light ochraceous, provided with a broad band of castaneous, or darker color, across the corium and embolium and continuous with the same colored patches on the scutellum, producing the effect of a very broad dark-colored fascia extending across the middle of the body; additional irregular castaneous or darker patches on the basal portion; membrane hyaline with five subparallel light brown veins. Connexivum alternated, widely exposed, the punctures obsolescent to obsolete; the segmental incisures bordered each side with rich castaneous, broad bands, the intermediate parts bright orange.

Venter essentially concolorous rich orange-brown, impunctate except for a few scattered punctures on and near the acetabula. Evaporatorium castaneous and coarsely rugose; auricle of the metasternal orifice short, finger-like and straight. The second and third (first and second visible) abdominal sternites each provided with a pair of large darker spots, one on each side of the very shallow and broad abdominal furrow; spiracles bordered with reddish brown; each segmental incisure provided with a marginal reddish brown triangular patch. Rostrum relatively long, reaching onto the third abdominal sternite. Legs ochraceous, the femora lightly clouded with brown subapically, the distal ends of the tibiae dark brown; tarsi concolorous ochraceous.

Described from 10 specimens.

Holotype: Female: 18.75 mm. long; 10.2 mm. wide across the humeri. Rio Tapiche, Peru. March, 1928. H. Bassler, collector. Deposited in the American Museum of Natural History.

Paratypes: Eight females, same data as above. One female, Rio Ucayali, Peru. November, 1929. H. Bassler, collector. All deposited in the American Museum of Natural History.

In color pattern this species most nearly approaches *Dinocoris maculatus* (Laporte). The most distinguishing characteristics probably are the over-all larger size and greater dorsal convexity, the contrasting rich ochraceous and castaneous colors, the broad transverse dark band across the middle of the dorsum, the almost concolorous rich orange-brown venter and the femora and tibiae devoid of well-defined fuscous annuli. The least that this new species could be would be a geographical race of *Dinocoris maculatus* in which size has been emphasized and color intensified; it is the author's feeling, however, that it warrants full species status.

Tribe Halyini Stal

Neadoxoplatys longirostra, new species

Obovate, the greatest body width across the suture between the third and fourth abdominal segments; depressed above, mildly convex below; sordid yellow or tan, punctures fuscous, deep and coarse, somewhat irregularly distributed on the pronotum.

Head almost as long medianly as wide through the eyes (100×105); juga and tylus subequal, apex of the head not incised as in related species but moderately rounded; lateral margins sinuate before the eyes and then subparallel; vertex and tylus transversely rugose; parallel bands of congested fuscous punctures extending from the ocelli to the tips of the juga; bases of the juga somewhat impressed just before the eyes, lateral margins very mildly reflexed; eyes brownish red; ocelli bright red, moderate in size and twice as far apart as each is from its eye. Antennae short, barely exceeding the combined length of the head and pronotum, concolorous fulvous, segment I not reaching beyond the apex of the head; segmental ratios: 30/22/40/60/82, i.e., segments II the shortest.

Pronotum three times as wide across the humeri as long medianly (238×80) and twice as wide there when measured longitudinally from the anterior lateral angle (238×120), i.e., the anterior margin deeply excavated to receive the head up to the eyes; margin behind the eyes somewhat oblique; humeri obtusely rounded, not produced; anterolateral margins essentially straight and weakly reflexed; each anterior lateral angle produced as a small, subrectangular lobe, reaching well beyond the lateral limit of the eye; punctures coarse across the middle of the disc; a band of smaller, congested punctures just inside the anterior margin; a band of well-defined fuscous punctures, uniformly spaced and paralleling the anterior two-thirds of the anterolateral margins; remaining punctures sparingly scattered; posterior margin transverse.

Scutellum somewhat longer than wide at the base (190×150), punctures rather regularly distributed but becoming smaller and denser toward the acutely rounded apex; basal angles vaguely calloused sordid yellow. Hemelytra rather regularly punctured, but possessing a triangular, impunctate, discal spot; apical margins very weakly sinuate, the external apical angles rectilinear. Connexivum moderately exposed and moderately punctate, the segmental incisures clouded each side with medium brown; apical segmental angles rectilinear and not exceeding the margin of the abdomen, those on segment VI obtuse.

Venter sordid yellow; base of head and the pleura coarsely punctured with fuscous; abdomen more finely punctured and diffused with testaceous clouding. Mesosternal carina piceous; rostrum long, the apex reaching onto the sixth sternite (male), segmental ratios: 50/20 + 100/120/100, i.e., the second segment and its pseudobase taken together equal to segment III and taken alone equal to segment IV; median abdominal furrow broad and shallow, ill-defined, extending through the fifth sternite. Evaporatorium dark castaneous and irregularly rugose; auricle of the metasternal canal

narrow and evenly curved forward. All segments of the legs concolorous yellow, the ante-apical femoral spines small and fuscous.

Apical margin of the male genital segment trisinate; the submarginal portion of the segment broadly and deeply impressed; parameres (claspers) extending above the dorsal margin of the segment, the heads carinate on the mesal surfaces and provided with a small subapical notch along the posterior margins.

Described from one specimen.

Holotype: Male: 10.5 mm. long; 5.1 mm. wide across the humeri; 5.4 mm. wide across the widest abdominal portion. Amaya Cispata Bay, Colombia, South America. November 25, 1916. Deposited in the American Museum of Natural History.

Smaller than *Neodoxoplatys saileri* Kormilev and apparently related to *Neodoxoplatys haywardi* Kormilev in size and color, but differing from that species by the form of the apex of the head, the presence of lobulate anterior lateral angles on the pronotum, the deeply emarginated pronotal anterior margin, the longer rostrum and the less robust and more strongly curved auricle of the metasternal canal.

Tribe Pentatomini Stal

Oenopiella testacea, new species

Body broadly oval, abdomen somewhat expanded across the second and third segments, the body form, from across the humeral spines to the abdominal apex, subtriangular; background concolorous brick red (testaceous), punctures fuscous, very fine and very dense, those on the hemelytra slightly more wide-spaced; tergum bright orange red.

Head two-thirds the length of the pronotum (60×90) and half again as long medianly as wide between the eyes (60×40); margins sinuate before the eyes, very obscurely reflexed; apex narrowly rounded; tylus just slightly longer than the jugs and weakly elevated; disc somewhat obliquely rugose before the eyes; ocelli red, about four times as far apart as each is from its eye; eyes brownish testaceous. Antennae nearly reaching the apex of the scutellum, segment I not attaining the apex of the head; segments I, II and III fulvous to luteous, their apices narrowly fuscous, segments IV and V fuscous, their bases broadly luteous; segmental proportions: 20/35/32/60/60, i.e., segments II and III, IV and V respectively subequal.

Pronotum roundly excavated anteriorly to receive the head, almost three times as wide across the humeral spines as long medianly (262×90); humeri spinately produced laterally and moderately emarginate just behind the spines; anterolateral margins just before the humeral spines acute and weakly trisinate, then obtusely thickened, slightly tumid, edentate but roughened and terminating at the anterior angles in a minute, oblique denticle; puncturation very fine and very dense except on the cicatrices which are weakly impressed and slightly bronzed; a thin median raised

linea present; posterolateral margins proportionately long, each (including the humeral spine) half as long as the width of the posterior margin which is transversely straight.

Scutellum slightly wider across the base than long (140×130), the frenum ending two-thirds the distance from the base; apex moderately rounded; punctures fine and very dense with a very fine transverse rugosity evident on the basal two-thirds; basal angles minutely impressed but not foveolate or calloused. Hemelytra quite broad, the lateral margins distinctly sinuate at the basal third; apical margins essentially straight, the external apical angles roundly acute; punctures more widespaced than those on the pronotum and scutellum and very evenly distributed; membrane transparent, light fulvous with six or seven concolorous veins, one or two of which bifurcate. Connexivum concolorous, narrowly exposed; apical segmental angles rectilinear and very slightly produced; transverse diameter across the second and third segments equal to the width of the pronotum across the humeri, exclusive of the humeral spines.

Venter concolorous fulvous to sordid yellow except the propleura which are lightly infuscated; punctures confined to the thoracic pleura; evaporatorium concolorous with the disc and transversely rugose; auricle of the metasternal orifice small, not much longer than the diameter of the ostiole, and terminating abruptly. Legs luteous to fulvous; femora dotted with sharply defined, circular, castaneous spots which are arranged in three or four irregular annuli; tibiae terete, with similar castaneous spots, but these not arranged in a specific pattern; tarsi concolorous. Rostrum barely surpassing the metacoxae. Abdomen unmarked in any way.

Apical margin of the male genital segment thin, broadly and deeply emarginate (V-shaped); lateral apical angles thickish, acutely rounded, their inner surfaces tumid; parameres (claspers) quite small, their heads vertically weakly arcuate, blunt-tipped and not at all reaching the dorsal margins of the segment. Basal plates of the female genital valves proportionately small, nearly equilateral triangular, the apices acute and slightly tumid.

Described from four specimens.

Holotype: Male: 8.0 mm. long; 6.5 mm. wide across the humeral spines; 5.5 mm. wide across the greatest abdominal diameter. Rio Santiago, Peru. November 27, 1924. H. Bassler, collector. Deposited in the American Museum of Natural History. Unfortunately this specimen is in very poor condition; being the only male in the type series it is, however, chosen as the holotype.

Allotype: Female: 8.25 mm. long; 7.5 mm. wide across the humeral spines; 6.0 mm. wide across the greatest abdominal diameter. Rio Santiago, Peru. November 27, 1924. H. Bassler, collector. Deposited in the American Museum of Natural History.

Paratypes: One female, Upper Rio Maranon, Peru. October 11, 1924. H. Bassler, collector; one female, San Martin, San Martin, Peru. December 16, 1946. J. C. Pallister, collector. Both deposited in the American Museum of Natural History.

By virtue of the subtriangular shape of the major posterior portion of the body this species readily distinguishes itself from other known species. The brick-red dorsum, the strikingly spotted femora and tibiae, the ampliate nature of the basal portion of the abdomen and the impressed cicatrices are additional distinctive characteristics. As far as general color goes it is probably most closely related to *O. punctaria* Stal.

(continued from page 144)

MEETING OF NOVEMBER 20, 1956

A regular meeting of the Society was held at the American Museum of Natural History; President Vishniac presiding. The Society voted unanimously to send a letter of congratulations to Professor Von Frisch, upon his 70th birthday. A letter from the Zoological Society of London expressing thanks for our contribution to the Zoological Record Fund was read. Mr. Peter Farb was elected to membership in the Society.

Dr. Treat introduced the speaker of the evening, Dr. Ilse Schwink, a visiting investigator at New York University. Dr. Schwink discussed "Orientation in Moths", drawing extensively upon her own very interesting experiments conducted in Von Frisch's laboratory.

Females of the silkmoth, *Bombyx mori* secrete an odor which initiates the mating flight of the males. The male moths, however, do not locate the female by flying toward the source of this odor, as has commonly been supposed. Instead, the males fly against the wind, a reaction which usually brings them fairly close to a female moth. Then, over a distance of a few feet, the males can locate the females by smell, and mating ensues.

Dr. Schwink suggested that the female odor might more properly be considered a "releaser" of behavior than an attractant, and this hypothesis was supported by numerous laboratory experiments. The releaser substance has been chemically characterized in Professor Butenandt's laboratory, and found to be an alcohol-like substance of fairly low molecular weight, probably having 10 to 15 carbon atoms. The substance is active as an alcohol but not as an ester, or in its bound form within the gland. It is a stable substance during several hours in the atmosphere, and is largely species-specific.

Ablation experiments showed that the receptors for this odor are distributed over the entire antenna of the male moth; removal of parts of the antenna diminishing the response of the male in a manner exactly similar to the effect of diluting the releaser substance to a weaker concentration.

A lively question period continued until 9:45 P.M. when the meeting was adjourned.

EDWARD S. HODGSON, *Secretary*

(continued on page 160)